

Abstract Of The Disclosure

A method for checking the integrity of GPS measurements for a moving vehicle includes determining a first inter-vehicle distance between a first vehicle and a second vehicle based on GPS measurements obtained at both vehicles, independently determining a second inter-vehicle distance based on relative motion of the first vehicle and the second vehicle obtained using INS sensors at both vehicles, and comparing the the first and second inter-vehicle distances. The integrity of the GPS measurements are checked if the first and second inter-vehicle distances are nearly equivalent. Methods for error detection and for mapping GPS multipath levels at each point in a vicinity for an entire range of satellite constellations are also described.

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